

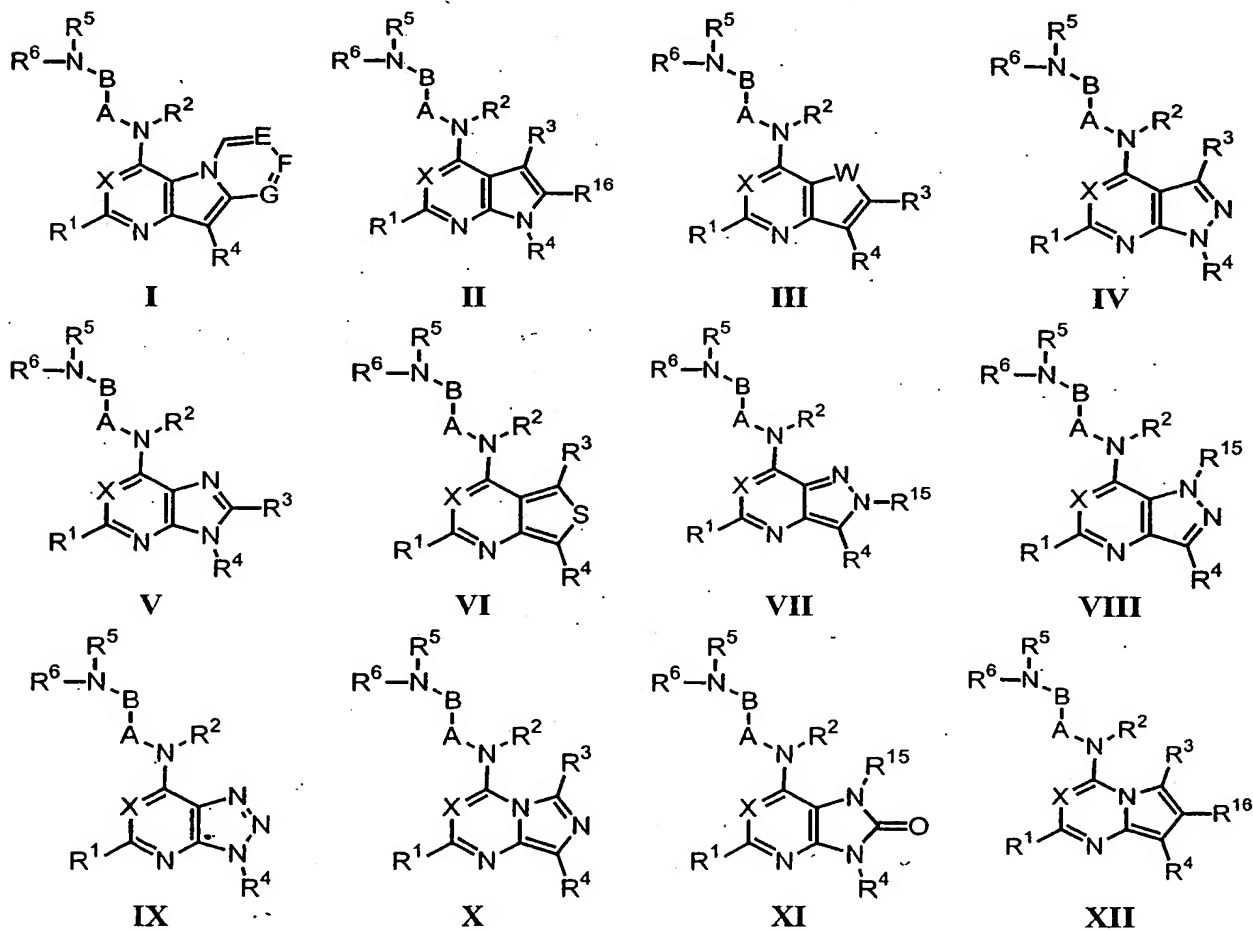
Abstract

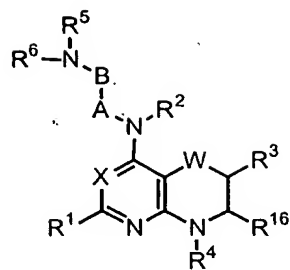
Certain Alkylene Diamine-Substituted Heterocycles

The present invention also provides a general method to whereby mono-, bi-, or tricyclic heterocycles may be modified to obtain potent antagonists at the NPY₁ receptor.

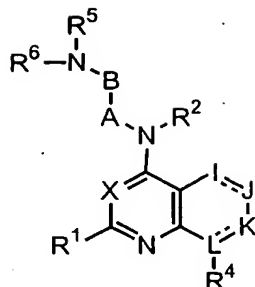
The present invention provides novel, potent, non-peptidic antagonists of NPY receptors, particularly, the NPY₁ receptors, designed from a selection of mono-, bi-, or tri-cyclic heterocyclic cores.

This invention relates to novel compounds, compositions, and methods for the treatment of physiological disorders associated with an excess of neuropeptide Y. The novel compounds encompassed by the present invention are those of the formula I-XV.

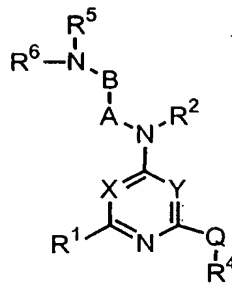




XIII



XIV



XV

wherein

X is N or CR¹⁴; W is S, O, or NR¹⁵; Y is N or CR³; E, F, and G are each, independently, CR³ or N; I and J are each, independently, C=O, S, O, CR³R¹⁶ or NR¹⁵ when single bonded to both adjacent ring atoms, or N, or CR³ when double bonded to an adjacent ring atom;

K is N or CR³ when double bonded to L or J, or O, S, C=O, CR³R¹⁶, or NR¹⁵ when single bonded to both adjacent ring atoms, or N or CR³ when double bonded to an adjacent ring atom;

L is N or CR¹⁶ when single bonded to all atoms to which it is attached, or C (carbon) when double bonded to K;

The 6- or 7-membered ring that contains I, J, K, and L may contain from 1 to 3 double bonds, from 0 to 2 heteroatoms, and from 0 to 2 C=O groups, wherein the carbon atom of such groups are part of the ring and the oxygen atom is a substituent on the ring;

Q is O or NR¹⁵.

Such compounds inhibit the activity of neuropeptide Y at those receptors are useful in treating physiological disorders associated with an excess of neuropeptide Y, including eating disorders, such as, for example, obesity and bulimia, and certain cardiovascular diseases, for example, hypertension.